WHAT IS CLAIMED IS:

1. An isolated nucleic acid encoding an SSG polypeptide, said polypeptide comprising an amino acid sequence that is at least about 70% identical to an amino acid sequence as set forth in SEQ ID NO:1 or 3.

2. The nucleic acid of claim 1, wherein said polypeptide specifically binds to polyclonal antibodies generated against a polypeptide that comprises an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 and SEQ ID NO:6.

3. The nucleic acid of claim 1, wherein said polypeptide comprises an amino acid sequence selected from the group consisting of SEQ ID NO:1, SEQ ID NO:3, SEQ ID NO:5 and SEQ ID NO:6.

4. The nucleic acid of claim 1, wherein said polypeptide forms a dimer with a second ABC polypeptide, and wherein said dimer exhibits sterol transport activity.

5. The nucleic acid of claim 4, wherein said dimer is a heterodimer.

6. The nucleic acid of claim 4, wherein said sterol is cholesterol.

7. The nucleic acid of claim 5, wherein said second ABC polypeptide is ABC8.

8. The nucleic acid of claim 1, wherein said nucleic acid hybridizes under moderately stringent hybridization conditions to a nucleic acid comprising a nucleotide sequence as set forth in SEQ ID NO:2 or 4.

9. The nucleic acid of claim 8, wherein said nucleic acid hybridizes under stringent hybridization conditions to a nucleic acid comprising a nucleotide sequence as set forth in SEQ ID NO:2 or 4.

10. The nucleic acid of claim 1, wherein said nucleic acid comprises a nucleotide sequence at least about 70% identical to a sequence as set forth in SEQ ID NO:2 or 4.

1   11.   The nucleic acid of claim 1, wherein said nucleic acid comprises a

2   nucleotide sequence as set forth in SEQ ID NO:2 or 4.

1   12.   The nucleic acid of claim 1, wherein said nucleic acid is greater

2   than 502 nucleotides in length.

1   13.   The nucleic acid of claim 1, wherein said nucleic acid is from a

2   mouse or a human.

1   14.   The nucleic acid of claim 1, wherein said nucleic acid is expressed

2   in the intestine or in the liver in the presence of an LXR agonist.

1   15.   The nucleic acid of claim 1, wherein said nucleic acid is expressed

2   in a tissue selected from the group consisting of liver, jejunum, ileum, and duodenum.

1   16.   An isolated nucleic acid encoding an SSG polypeptide, said

2   polypeptide comprising an amino acid sequence selected from the group consisting of

3   SEQ ID NO:5 and SEQ ID NO:6.

1   17.   An expression cassette comprising the nucleic acid of claim 1

2   operably linked to a promoter.

1   18.   An isolated cell comprising the expression cassette of claim 17.

1   19.   An isolated SSG polypeptide, said polypeptide comprising an

2   amino acid sequence that is at least about 70% identical to an amino acid sequence as set

3   forth in SEQ ID NO:1 or 3.

1   20.   The isolated polypeptide of claim 19, wherein said polypeptide

2   selectively binds to polyclonal antibodies generated against a polypeptide comprising an

3   amino acid sequence as set forth in SEQ ID NO:1 or 3.

1   21.   The isolated polypeptide of claim 19, wherein said polypeptide

2   comprises an amino acid sequence as set forth in SEQ ID NO:1 or 3.

1   22.   The isolated polypeptide of claim 19, wherein said polypeptide

2   forms a dimer with a second ABC polypeptide, and wherein said dimer exhibits sterol

3   transport activity.

1   23.   The isolated polypeptide of claim 22, wherein said dimer is a

2 heterodimer.

1   24.   The isolated polypeptide of claim 23, wherein said second ABC

2 polypeptide is ABC8.

1   25.   The isolated polypeptide of claim 22, wherein said sterol is

2 cholesterol.

1   26.   The isolated polypeptide of claim 19, wherein said polypeptide is

2 expressed in the intestine or in the liver in the presence of an LXR agonist.

1   27.   The isolated polypeptide of claim 19, wherein said polypeptide is

2 expressed in a tissue selected from the group consisting of the liver, jejunum, ileum, and

3 duodenum.

1   28.   The isolated polypeptide of claim 19, wherein said polypeptide is

2 from a mouse or a human.

1   29.   An antibody generated against the isolated polypeptide of claim 19.

1   30.   An isolated SSG polypeptide, said polypeptide comprising an

2 amino acid sequence selected from the group consisting of SEQ ID NO:5 and SEQ ID

3 NO:6.

1   31.   A method of making an SSG polypeptide, the method comprising:

2   (i) introducing a nucleic acid of claim 1 into a host cell or cellular extract;

3 and

4   (ii) incubating said host cell or cellular extract under conditions such that

5 said SSG polypeptide is expressed in the host cell or cellular extract.

1   32.   The method of claim 31, further comprising recovering the SSG

2 polypeptide from the host cell or cellular extract.

1   33.   A method of identifying a compound useful in the treatment or

2 prevention of a sterol-related disorder, said method comprising contacting an SSG

3 polypeptide with a test agent, and determining the functional effect of said test agent upon

4   said polypeptide, wherein a functional effect exerted on said polypeptide by said test

5   agent indicates that said test agent is a compound useful in the treatment or prevention of

6   said sterol-related disorder.

1   34.   The method of claim 33, wherein said sterol is cholesterol.

1   35.   The method of claim 33, wherein said polypeptide comprises an

2   amino acid sequence that is at least about 70% identical to an amino acid sequence as set

3   forth in SEQ ID NO:1 or 3.

1   36.   The method of claim 33, wherein said polypeptide is present in a

2   cell or cell membrane.

1   37.   The method of claim 33, wherein said polypeptide is bound to a

2   heterologous ABC polypeptide, forming a heterodimer.

1   38.   The method of claim 33, wherein said functional effect comprises

2   an increase in the sterol transport activity of said polypeptide.

1   39.   The method of claim 33, wherein said functional effect comprises a

2   physical interaction between said test agent and said polypeptide.

1   40.   The method of claim 39, wherein said physical interaction is

2   detected using a direct binding assay.

1   41.   The method of claim 33, wherein said sterol-related disorder is

2   sitosterolemia.

1   42.   The method of claim 33, wherein said sterol-related disorder is

2   selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones,

3   HDL deficiency, atherosclerosis, and nutritional deficiencies.

1   43.   A method of identifying a compound useful in the treatment or

2   prevention of a sterol-related disorder, said method comprising contacting with a test

3   agent a cell that expresses or is capable of expressing an SSG polypeptide, and

4   determining the functional effect of said test agent upon said cell;

5   wherein a functional effect exerted on said cell by said test agent indicates

6   that said test agent is a compound useful in the treatment or prevention of said sterol-

7   related disorder.

1   44.   The method of claim 43, wherein said sterol is cholesterol.

1   45.   The method of claim 43, wherein said SSG polypeptide comprises

2   an amino acid sequence that is at least about 70% identical to an amino acid sequence as

3   set forth in SEQ ID NO:1 or 3.

1   46.   The method of claim 43, wherein said compound produces an

2   increase in the expression of an SSG gene that encodes said SSG polypeptide.

1   47.   The method of claim 46, wherein said increase in the expression of

2   said SSG gene is detected by detecting the level of SSG mRNA in said cell.

1   48.   The method of claim 46, wherein said increase in the expression of

2   said SSG gene is detected by detecting the level of SSG polypeptide in said cell.

1   49.   The method of claim 46, wherein said increase in the expression of

2   said SSG gene is detected by detecting the level of SSG protein activity in said cell.

1   50.   The method of claim 43, wherein said compound modulates the

2   level of sterol transport activity in said cell.

1   51.   The method of claim 50, wherein said sterol transport activity in

2   said cell is detected by detecting the rate of sterol efflux in said cell.

1   52.   The method of claim 51, wherein said sterol is cholesterol.

1   53.   The method of claim 46, wherein said increase in the expression of

2   said SSG gene is mediated by LXR or RXR.

1   54.   The method of claim 43, wherein said sterol-related disorder is

2   sitosterolemia.

1   55.   The method of claim 43, wherein said sterol-related disorder is

2   selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones,

3   HDL deficiency, atherosclerosis, and nutritional deficiencies.

1   56.   A method of treating or preventing a sterol-related disorder in a

2 mammal, said method comprising administering to said mammal a compound that

3 increases the level of expression or activity of an SSG polypeptide in a plurality of cells

4 of said mammal.

1   57.   The method of claim 56, wherein said sterol is cholesterol.

1   58.   The method of claim 56, wherein said sterol-related disorder is

2 sitosterolemia.

1   59.   The method of claim 56, wherein said sterol-related disorder is

2 selected from the group consisting of hypercholesterolemia, hyperlipidemia, gall stones,

3 HDL deficiency, atherosclerosis, and nutritional deficiencies.

1   60.   The method of claim 56, wherein said compound produces a

2 decrease in the amount of dietary sterol that is absorbed in said mammal.

1   61.   The method of claim 56, wherein said compound produces a

2 decrease in the amount of sterol that is retained in the liver of said mammal.

1   62.   The method of claim 56, wherein said compound is identified using

2 the method of claim 33 or 43.

1   63.   The method of claim 56, wherein said compound causes an

2 increase in LXR or RXR activity within cells of said mammal.

1   64.   A method of prescreening to identify a candidate therapeutic agent

2 that modulates SSG activity in a mammal, the method comprising:

3   providing a cell which comprises an SSG polypeptide; and

4   a test compound; and

5   determining whether the amount of sterol transport activity in said cell is

6 increased or decreased in the presence of the test compound relative to the activity in the

7 absence of the test compound;

8   wherein a test compound that causes an increase or decrease in the amount

9 of sterol transport activity is a candidate therapeutic agent for modulation of SSG activity

10 in a mammal.

1   65.   The method of claim 64, further comprising a secondary step,

2 wherein said test compound is administered to a mammal, and the absorption of dietary

3 sterol in said mammal is detected.

1   66.   A method of inducing the expression of an ABC gene in a

2 mammalian cell, said method comprising increasing the level of LXR or RXR activity in

3 said cell.

1   67.   The method of claim 66, wherein said ABC gene encodes a protein

2 that is involved in the transport of a sterol.

1   68.   The method of claim 67, wherein said ABC gene is selected from

2 the group consisting of SSG, ABC1 and ABC8.

1   69.   The method of claim 67, wherein said sterol is cholesterol.

1   70.   The method of claim 66, wherein said LXR or RXR activity is

2 increased by administering an LXR or RXR agonist to said cell.

1   71.   The method of claim 66, wherein said cell is present in a mammal.

1   72.   The method of claim 66, wherein said cell is a liver, intestinal, or

2 kidney cell.

1   73.   An isolated nucleic acid comprising at least one nucleotide

2 sequence selected from the group consisting of exon 1 (SEQ ID NO:7), exon 2 (SEQ ID

3 NO:8), exon 3 (SEQ ID NO:9), exon 4 (SEQ ID NO:10), exon 5 (SEQ ID NO:11), exon 6

4 (SEQ ID NO:12), exon 7 (SEQ ID NO:13), exon 8 (SEQ ID NO:14), exon 9 (SEQ ID

5 NO:15), exon 10 (SEQ ID NO:16), exon 11 (SEQ ID NO:17), exon 12 (SEQ ID NO:18)

6 and exon 13 (SEQ ID NO:19).

1   74.   The isolated nucleic acid sequence of claim 73, further comprising

2 at least one intron.